

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

MHBA CB L.L.L.P.

AUTHORIZING THE OPERATION OF

MHBA Chocolate Bayou Plant
Industrial Organic Chemicals

LOCATED AT

Brazoria County, Texas

Latitude 29° 15' 21" Longitude 95° 12' 37"

Regulated Entity Number: RN106398795

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O2320 Issuance Date: _____

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
- D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
- E. Emission units subject to 40 CFR Part 63, Subparts YY, FFFF and ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §113.560, §113.890, and §113.1090, respectively, which incorporates the 40 CFR Part 63 Subpart by reference.
- F. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.302 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)
 - (iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)
 - (v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit
- G. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:
 - (i) Title 30 TAC § 101.352 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)
 - (iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)
 - (iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)

- (v) Title 30 TAC § 101.358 (relating to Emission Monitoring and Compliance Demonstration)
 - (vi) Title 30 TAC § 101.359 (relating to Reporting)
 - (vii) Title 30 TAC § 101.360 (relating to Level of Activity Certification)
 - (viii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit
- H. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 101.372 (relating to General Provisions)
 - (ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)
 - (iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)
 - (iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)
 - (v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit are applicable requirements of this permit
- 2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

- F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
- A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in

compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
 - (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.
- B. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- C. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

- (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
 - E. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:
 - (i) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)
 - (ii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)
 - (iii) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
- 4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
- 5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
 - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)

- C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
 - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
 - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
 - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
 - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
 - H. Title 40 CFR § 61.15 (relating to Modification)
 - I. Title 40 CFR § 61.19 (relating to Circumvention)
6. For facilities where total annual benzene quantity from waste is greater than or equal to 10 megagrams per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:
- A. Title 40 CFR § 61.342(c)(1)(i) - (iii) (relating to Standards: General)
 - B. Title 40 CFR § 61.342(c)(2) (relating to Standards: General)
 - C. For exempting waste streams:
 - (i) Title 40 CFR § 61.342(c)(3)(i) (relating to Standards: General)
 - (ii) Title 40 CFR § 61.342(c)(3)(ii)(A) - (C) (relating to Standards: General)
 - D. Title 40 CFR § 61.342(f)(1), and (2) (relating to Standards: General)
 - E. Title 40 CFR § 61.342(g) (relating to Standards: General)
 - F. Title 40 CFR § 61.350(a) and (b) (relating to Standards: Delay of Repair)
 - G. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions)
 - H. Title 40 CFR § 61.355(j) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures
 - I. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)
 - J. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)

- K. Title 40 CFR § 61.356(b)(2)(i) - (ii) (relating to Recordkeeping Requirements)
 - L. Title 40 CFR § 61.356(b)(5) (relating to Recordkeeping Requirements)
 - M. Title 40 CFR § 61.356(c) (relating to Recordkeeping Requirements)
 - N. Title 40 CFR § 61.357(a), (d)(1), (d)(2) (d)(6) and (d)(8) (relating to Reporting Requirements)
 - O. Title 40 CFR § 61.357(d)(3) (relating to Reporting Requirements)
7. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.
 8. For process facilities subject to maintenance wastewater requirements as specified in 40 CFR § 63.1106(b), the permit holder shall comply with the requirements of 40 CFR § 63.105(b) - (e) (relating to Maintenance Wastewater Requirements) (Title 30 TAC Chapter 113, Subchapter C, § 113.560 incorporated by reference).
 9. For miscellaneous chemical process facilities subject to maintenance wastewater requirements as specified in 40 CFR § 63.2485, Table 7, the permit holder shall comply with the requirements of 40 CFR § 63.105 (relating to Maintenance Wastewater Requirements) (Title 30 TAC Chapter 113, Subchapter C, § 113.890 incorporated by reference).

Additional Monitoring Requirements

10. Unless otherwise specified, the permit holder shall comply with the compliance assurance monitoring requirements as specified in the attached “CAM Summary” upon issuance of the permit. In addition, the permit holder shall comply with the following:
 - A. The permit holder shall comply with the terms and conditions contained in 30 TAC § 122.147 (General Terms and Conditions for Compliance Assurance Monitoring).
 - B. The permit holder shall report, consistent with the averaging time identified in the “CAM Summary,” deviations as defined by the deviation limit in the “CAM Summary.” Any monitoring data below a minimum limit or above a maximum limit, that is collected in accordance with the requirements specified in 40 CFR § 64.7(c), shall be reported as a deviation. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

- C. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “CAM Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c).
- D. The permit holder shall operate the monitoring, identified in the attached “CAM Summary,” in accordance with the provisions of 40 CFR § 64.7.
- E. The permit holder shall comply with either of the following requirements for any capture system associated with the VOC control device subject to CAM. If the results of the following inspections indicate that the capture system is not working properly, the permit holder shall promptly take necessary corrective actions:
 - (i) Once a year the permit holder shall inspect the capture system in compliance of CAM for leaks in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppm above background or as defined by the underlying applicable requirement; or
 - (ii) Once a month, the permit holder shall conduct a visual, audible, and/or olfactory inspection of the capture system in compliance of CAM to detect leaking components.
- F. The permit holder shall comply with either of the following requirements for any bypass of the control device subject to CAM. If the results of the following inspections or monitoring indicate bypass of the control device, the permit holder shall promptly take necessary corrective actions and report a deviation:
 - (i) Install a flow indicator that is capable of recording flow, at least once every fifteen minutes, immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (ii) Once a month, the permit holder shall inspect the valves checking the position of the valves and the condition of the car seals. Identify all times when the car seal has been broken and the valve position has been changed to allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere.

- G. The permit holder shall comply with the requirements of 40 CFR § 70.6(a)(3)(ii)(A) and 30 TAC § 122.144(1)(A)-(F) for documentation of all required inspections.

New Source Review Authorization Requirements

11. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
- A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
12. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
13. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, material safety data sheets (MSDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

14. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed

12 months and the certification must be submitted within 30 days after the end of the period being certified.

15. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
 - A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
 - (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:
 - (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)
 - B. The permit holder shall comply with the Initial Control Plan unit listing requirement in 30 TAC § 117.350(c) and (c)(1).
 - C. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.
16. Use of Emission Credits to comply with applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) Offsets for Title 30 TAC Chapter 116
 - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)
 - (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
 - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

- (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
- 17. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
 - B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

- 18. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

19. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone.
 - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.
 - B. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

Permit Location

20. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

21. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary	17
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Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (§ 122.144), Reporting Terms and Conditions (§ 122.145), and Compliance Certification Terms and Conditions (§ 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
326EG1	SRIC ENGINES	N/A	R7300	30 TAC Chapter 117, Subchapter B	No changing attributes.
326EG1	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
326T10	STORAGE TANKS/VESSELS	N/A	R5112-T10	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T1-1	STORAGE TANKS/VESSELS	N/A	R5112-79	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T1-2	STORAGE TANKS/VESSELS	N/A	R5112-80	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T12-1	STORAGE TANKS/VESSELS	N/A	R5112-81	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T12-2	STORAGE TANKS/VESSELS	N/A	R5112-82	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T12-3	STORAGE TANKS/VESSELS	N/A	R5112-83	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T16	STORAGE TANKS/VESSELS	N/A	R5112-T16	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T17-1	STORAGE TANKS/VESSELS	N/A	R5112-84	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T17-2	STORAGE TANKS/VESSELS	N/A	R5112-85	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T17-3	STORAGE TANKS/VESSELS	N/A	R5112-86	30 TAC Chapter 115, Storage of VOCs	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
326T18-1	STORAGE TANKS/VESSELS	N/A	R5112-87	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T18-2	STORAGE TANKS/VESSELS	N/A	R5112-88	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T22-1	STORAGE TANKS/VESSELS	N/A	R5112-89	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T22-2	STORAGE TANKS/VESSELS	N/A	R5112-90	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
326T8	STORAGE TANKS/VESSELS	N/A	R5112-T8	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
327T11	STORAGE TANKS/VESSELS	N/A	R5112-T11	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
327T3-1	STORAGE TANKS/VESSELS	N/A	R5112-92	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
327T3-1	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
327T3-2	STORAGE TANKS/VESSELS	N/A	R5112-93	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
327T3-2	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
327T5	STORAGE TANKS/VESSELS	N/A	R5112-T5	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
337H1	EMISSION POINTS/STATIONARY VENTS/PROCESS	N/A	R5121-16	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	VENTS				
337H2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-17	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
337T9	STORAGE TANKS/VESSELS	N/A	R5112-94	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
43T5	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
44T5	STORAGE TANKS/VESSELS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
MHBA-FUG	FUGITIVE EMISSION UNITS	N/A	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.
MHBA-FUG	FUGITIVE EMISSION UNITS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
MHBA-MCPU	CHEMICAL MANUFACTURING PROCESS	N/A	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.
MHBA-MCPU	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63FFFF	40 CFR Part 63, Subpart FFFF	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
326EG1	EU	R7300	EXEMPT	30 TAC Chapter 117, Subchapter B	§ 117.303(a)(6)(D) [G]§ 117.310(f)	Units exempted from the provisions of this division, except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1), and 117.354(a)(5), include stationary gas turbines and stationary internal combustion engines that are used exclusively in emergency situations, except that operation for testing or maintenance purposes is allowed for up to 52 hours per year, based on a rolling 12-month average.	None	§ 117.340(j) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
326EG1	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table 2d.4 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(b) § 63.6640(f)(1) [G]§ 63.6640(f)(2) [G]§ 63.6640(f)(4)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at an area source, you must comply with the requirements as specified in Table 2d.4.a-c.	§ 63.6625(f) § 63.6625(i) § 63.6640(a) § 63.6640(a)-Table 6.9.a.i § 63.6640(a)-Table 6.9.a.ii § 63.6640(b)	§ 63.6625(i) § 63.6655(a) § 63.6655(a)(1) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(b) § 63.6640(e) § 63.6650(f)
326T10	EU	R5112-T10	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
326T1-1	EU	R5112-79	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T1-2	EU	R5112-80	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T12-1	EU	R5112-81	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T12-2	EU	R5112-82	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T12-3	EU	R5112-83	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
326T16	EU	R5112-T16	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
326T17-1	EU	R5112-84	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T17-2	EU	R5112-85	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T17-3	EU	R5112-86	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T18-1	EU	R5112-87	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
326T18-2	EU	R5112-88	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T22-1	EU	R5112-89	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T22-2	EU	R5112-90	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None
326T8	EU	R5112-T8	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
327T11	EU	R5112-T11	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(6)(A) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
327T3-1	EU	R5112-92	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(3) § 115.112(e)(3)(A) § 115.112(e)(3)(A)(i)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.115(a) § 115.115(a)(1) § 115.116(a)(1) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(A) § 115.118(a)(5) § 115.118(a)(7)	None
327T3-1	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
327T3-2	EU	R5112-93	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(3) § 115.112(e)(3)(A) § 115.112(e)(3)(A)(i)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with	§ 115.115(a) § 115.115(a)(1) § 115.116(a)(1) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(A) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
327T3-2	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
327T5	EU	R5112-T5	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
337H1	EP	R5121-16	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.121(a)(1) § 115.122(a)(1) § 115.122(a)(1)(A)	No person may allow a vent gas stream containing VOC to be emitted from any process vent, unless the vent gas stream is burned properly in accordance with §115.122(a)(1) of this title.	[G]§ 115.125 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2) ** See CAM Summary	§ 115.126 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2)	None
337H2	EP	R5121-17	VOC	30 TAC Chapter	§ 115.121(a)(1)	No person may allow a	[G]§ 115.125	§ 115.126	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				115, Vent Gas Controls	§ 115.122(a)(1) § 115.122(a)(1)(A)	vent gas stream containing VOC to be emitted from any process vent, unless the vent gas stream is burned properly in accordance with §115.122(a)(1) of this title.	§ 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2) ** See CAM Summary	§ 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2)	
337T9	EU	R5112-94	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(3) § 115.112(e)(3)(A) § 115.112(e)(3)(A)(i)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.115(a) § 115.115(a)(1) § 115.116(a)(1) [G]§ 115.117	§ 115.118(a)(4) § 115.118(a)(4)(A) § 115.118(a)(5) § 115.118(a)(7)	None
43T5	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
44T5	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
MHBA-FUG	EU	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2480(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart FFFF	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart FFFF
MHBA-FUG	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
MHBA-MCPU	EU	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2460(a) § 63.2450(b) § 63.2450(i)(1) § 63.2450(i)(2) § 63.2460(a)-Table 2.1.c § 63.2460(b)	You must meet each emission limit in Table 2 to this subpart that applies to you, and you must meet each applicable requirement specified in §63.2460(b)	[G]§ 63.115(d)(2)(v) § 63.115(d)(3)(iii) § 63.2450(g) § 63.2450(g)(1) § 63.2450(g)(2) [G]§ 63.2450(g)(3) § 63.2450(g)(4)	§ 63.2450(k)(6) § 63.2460(c)(3)(ii) § 63.2460(c)(6) § 63.2525(g) § 63.983(b) [G]§ 63.983(d)(2) § 63.988(b)(1)	§ 63.2450(q) § 63.2460(c)(3)(i) § 63.988(b)(1) § 63.996(b)(2) § 63.996(c)(6) § 63.997(c)(3) § 63.998(a)(2)(ii)(A)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.2460(c)(7) § 63.982(c) § 63.982(c)(2) § 63.983(a)(1) § 63.983(a)(2) § 63.983(d)(1) § 63.983(d)(1)(i) [G]§ 63.983(d)(2) § 63.983(d)(3) § 63.988(a)(1) § 63.988(a)(2) § 63.996(c)(1) § 63.996(c)(2) § 63.996(c)(2)(i) § 63.996(c)(3) § 63.996(c)(4) § 63.996(c)(5) § 63.996(c)(6) [G]§ 63.997(c)(1) § 63.997(c)(3) [G]§ 63.997(d)	and (c).	§ 63.2450(k)(6) § 63.2460(c)(2)(i) § 63.2460(c)(2)(ii) § 63.2460(c)(2)(vi) § 63.2460(c)(3) § 63.2460(c)(3)(i) § 63.2460(c)(4) § 63.2460(c)(6) § 63.983(b) [G]§ 63.983(b)(1) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1) § 63.983(c)(2) § 63.983(c)(3) § 63.983(d)(1) § 63.983(d)(1)(ii) § 63.988(b)(1) § 63.988(c)(1) § 63.996(b)(1) § 63.996(b)(1)(i) § 63.996(b)(2) § 63.997(a) [G]§ 63.997(c)(1) § 63.997(c)(2) § 63.997(c)(3) § 63.997(c)(3)(iii) [G]§ 63.997(d) § 63.997(e) § 63.997(e)(1)(i) [G]§ 63.997(e)(1)(iv) [G]§ 63.997(e)(1)(v) § 63.997(e)(2) § 63.997(e)(2)(i) § 63.997(e)(2)(i)(B) § 63.997(e)(2)(ii) § 63.997(e)(2)(iii) § 63.997(e)(2)(iii)(A) [G]§ 63.997(e)(2)(iii)(B)	§ 63.996(c)(2)(ii) § 63.998(a)(2)(i) § 63.998(a)(2)(ii)(A) § 63.998(a)(2)(ii)(B)(1) § 63.998(a)(2)(ii)(B)(4) [G]§ 63.998(b)(1) [G]§ 63.998(b)(2) [G]§ 63.998(b)(3) [G]§ 63.998(b)(5) [G]§ 63.998(c)(1) § 63.998(c)(2)(iii) § 63.998(c)(3)(iii) [G]§ 63.998(d)(1) § 63.998(d)(3)(i) § 63.998(d)(3)(ii) § 63.998(d)(5)	[G]§ 63.998(b)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) [G]§ 63.999(b)(3) § 63.999(b)(5) § 63.999(c)(1) [G]§ 63.999(c)(2) § 63.999(c)(6) [G]§ 63.999(c)(6)(i) § 63.999(c)(6)(iv)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 63.997(e)(2)(iii)(C) [G]§ 63.997(e)(2)(iii)(D) [G]§ 63.997(e)(2)(iii)(E)		
MHBA-MCPU	EP	63FFFF	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§ 63.2455(a)-Table 1.1.a.i § 63.2450(b) § 63.2450(i)(1) § 63.2450(i)(2) § 63.2455(a) § 63.2455(b) § 63.2455(b)(1) § 63.982(c) § 63.982(c)(2) § 63.983(a)(1) § 63.983(a)(2) § 63.983(d)(1) § 63.983(d)(1)(i) [G]§ 63.983(d)(2) § 63.983(d)(3) § 63.988(a)(1) § 63.988(a)(2) § 63.996(c)(1) § 63.996(c)(2) § 63.996(c)(2)(i) § 63.996(c)(3) § 63.996(c)(4) § 63.996(c)(5) § 63.996(c)(6) [G]§ 63.997(c)(1) § 63.997(c)(3) [G]§ 63.997(d)	For each Group 1 continuous process vent, the owner or operator must reduce emissions to an outlet process concentration <20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except flare).	[G]§ 63.115(d)(2)(v) § 63.115(d)(3)(iii) § 63.2450(g) § 63.2450(g)(1) § 63.2450(g)(2) [G]§ 63.2450(g)(3) § 63.2450(g)(4) § 63.2450(k)(6) § 63.983(b) [G]§ 63.983(b)(1) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1) § 63.983(c)(2) § 63.983(c)(3) § 63.983(d)(1) § 63.983(d)(1)(ii) § 63.988(b)(1) § 63.988(c)(1) § 63.996(b)(1) § 63.996(b)(1)(i) § 63.996(b)(2) § 63.997(a) [G]§ 63.997(c)(1) § 63.997(c)(2) § 63.997(c)(3) § 63.997(c)(3)(iii) [G]§ 63.997(d) § 63.997(e) § 63.997(e)(1)(i) [G]§ 63.997(e)(1)(iv) [G]§ 63.997(e)(1)(v) § 63.997(e)(2) § 63.997(e)(2)(i) § 63.997(e)(2)(i)(B) § 63.997(e)(2)(ii)	§ 63.2450(k)(6) § 63.2525(g) § 63.2525(h) § 63.983(b) [G]§ 63.983(d)(2) § 63.988(b)(1) § 63.996(c)(2)(ii) § 63.998(a)(2)(i) § 63.998(a)(2)(ii)(A) § 63.998(a)(2)(ii)(B)(1) § 63.998(a)(2)(ii)(B)(4) [G]§ 63.998(b)(1) [G]§ 63.998(b)(2) [G]§ 63.998(b)(3) [G]§ 63.998(c)(1) § 63.998(c)(2)(iii) § 63.998(c)(3)(iii) [G]§ 63.998(d)(1) § 63.998(d)(3)(i) § 63.998(d)(3)(ii) § 63.998(d)(5)	§ 63.2450(q) § 63.988(b)(1) § 63.996(b)(2) § 63.996(c)(6) § 63.997(c)(3) § 63.998(a)(2)(ii)(A) [G]§ 63.998(b)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) [G]§ 63.999(b)(3) § 63.999(b)(5) [G]§ 63.999(c)(1) [G]§ 63.999(c)(2) § 63.999(c)(6) [G]§ 63.999(c)(6)(i) § 63.999(c)(6)(iv)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 63.997(e)(2)(iii) § 63.997(e)(2)(iii)(A) [G]§ 63.997(e)(2)(iii)(B) [G]§ 63.997(e)(2)(iii)(C) [G]§ 63.997(e)(2)(iii)(D) [G]§ 63.997(e)(2)(iii)(E)		

Additional Monitoring Requirements

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CAM Summary

Unit/Group/Process Information	
ID No.: 337H1	
Control Device ID No.: 337H1	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-16
Pollutant: VOC	Main Standard: § 115.121(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum hourly average combustion temperature of 960 °C.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> ± 0.75% of the temperature being measured expressed in degrees Celsius; or ± 2.5 degrees Celsius. 	

*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

CAM Summary

Unit/Group/Process Information	
ID No.: 337H2	
Control Device ID No.: 337H2	Control Device Type: Thermal Incinerator (Direct Flame Incinerator/Regenerative Thermal Oxidizer)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-17
Pollutant: VOC	Main Standard: § 115.121(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per day	
Averaging Period: n/a*	
Deviation Limit: Minimum hourly average combustion temperature of 960 °C.	
<p>CAM Text: The monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:</p> <ul style="list-style-type: none"> ± 0.75% of the temperature being measured expressed in degrees Celsius; or ± 2.5 degrees Celsius. 	

*The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.

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The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
326T10	N/A	40 CFR Part 60, Subpart Kb	Tank capacity is between 75 cubic meters and 151 cubic meters and stores a liquid with a maximum true vapor pressure less than 15 kPa.
326T1-1	N/A	40 CFR Part 60, Subpart K	Tank does not store petroleum liquids.
326T1-1	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
326T1-1	N/A	40 CFR Part 60, Subpart Kb	Tank was installed before July 23, 1984 and no NSPS modification or reconstruction has been done.
326T1-2	N/A	40 CFR Part 60, Subpart K	Tank does not store petroleum liquids.
326T1-2	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
326T1-2	N/A	40 CFR Part 60, Subpart Kb	Tank was installed before July 23, 1984 and no NSPS modification or reconstruction has been done.
326T12-1	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T12-2	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T12-3	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T16	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
326T17-1	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			liquid with maximum true vapor pressure less than 3.5 kPa.
326T17-2	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T17-3	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T18-1	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T18-2	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T21	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity of the storage container is not more than 1,000 gallons.
326T21	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
326T22-1	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T22-2	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
326T7	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
326T7	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
326T8	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
327T11	N/A	40 CFR Part 60, Subpart Kb	Tank has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
327T3-1	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
327T3-2	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
327T5	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
337T1	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
337T11	N/A	30 TAC Chapter 115, Industrial Wastewater	Rainwater run off only and not an affected VOC wastewater stream
337T11-1	N/A	30 TAC Chapter 115, Industrial Wastewater	Rainwater run off only and not an affected VOC wastewater stream
337T15	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
337T15	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
337T2	N/A	40 CFR Part 60, Subpart K	Tank does not store petroleum liquids.
337T2	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
337T2	N/A	40 CFR Part 60, Subpart Kb	Tank was installed before July 23, 1984 and no NSPS modification or reconstruction has been done.
337T3-1	N/A	40 CFR Part 60, Subpart K	Tank does not store petroleum liquids.
337T3-1	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
337T3-1	N/A	40 CFR Part 60, Subpart Kb	Tank was installed before July 23, 1984 and no NSPS modification or reconstruction has been done.
337T3-2	N/A	40 CFR Part 60, Subpart K	Tank does not store petroleum liquids.
337T3-2	N/A	40 CFR Part 60, Subpart Ka	Tank does not store petroleum liquids.
337T3-2	N/A	40 CFR Part 60, Subpart Kb	Tank was installed before July 23, 1984 and no NSPS modification or reconstruction has been done.
337T5	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
337T5	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
337T7	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
337T7	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
337T9	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
337Z2	N/A	30 TAC Chapter 111, Visible Emissions	Flare is used only during emergency or upset conditions.
337Z2	N/A	40 CFR Part 60, Subpart A	Flare is not used to comply with 40 CFR Part 60 or 61.
337Z2	N/A	40 CFR Part 63, Subpart A	Flare is not used to comply with 40 CFR Part 63.
338T4-1	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
338T4-1	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
338T4-2	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
338T4-2	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
43T13	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
43T41	N/A	30 TAC Chapter 115, Storage of VOCs	Capacity of the storage container is not more than 1,000 gallons.
43T41	N/A	40 CFR Part 60, Subpart Kb	Capacity of the storage vessel is less than 75 cubic meters.
43T7	N/A	30 TAC Chapter 115, Storage of VOCs	Tank does not store volatile organic compounds (VOCs).
43T7	N/A	40 CFR Part 60, Subpart Kb	Tank does not store volatile organic liquids (VOLs).
MHBA-FUG	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	Unit does not produce as intermediates or final products any of the chemicals listed in 60.489 and thus is not considered a SOCMi unit, nor is it a petroleum refinery, polymer, resin, MTBE, or natural gas/gasoline processing facility.
MHBA-FUG	N/A	40 CFR Part 60, Subpart VV	MHBA unit is not considered as a SOCMi unit.
MHBA-MCPU	N/A	40 CFR Part 63, Subpart G	MHBA is not a HON CMPU.
PRO_MPURE	N/A	40 CFR Part 60, Subpart NNN	Process does not produce a SOCMi chemical.
PRO_MRX	N/A	40 CFR Part 63, Subpart F	Process is not a HON process.

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit..... 42

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX307A	Issuance Date: 02/28/2013
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 8372	Issuance Date: 02/28/2013
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.124	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.476	Version No./Date: 09/04/2000
Number: 106.478	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 14	Version No./Date: 09/23/1982

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
326EG1	EMERGENCY GENERATOR	8372, PSDTX307A
326T10	PROPYLENE GLYCOL TANK	8372, PSDTX307A
326T1-1	MMP TANK	8372, PSDTX307A
326T12-1	PRODUCT TANK	8372, PSDTX307A
326T12-2	PRODUCT TANK	8372, PSDTX307A
326T12-3	PRODUCT TANK	8372, PSDTX307A
326T1-2	MMP TANK	8372, PSDTX307A
326T16	DIESEL TANK	8372, PSDTX307A
326T17-1	PRODUCT TANK	8372, PSDTX307A
326T17-2	PRODUCT TANK	8372, PSDTX307A
326T17-3	PRODUCT TANK	8372, PSDTX307A
326T18-1	MMP TANK	8372, PSDTX307A
326T18-2	MMP TANK	8372, PSDTX307A
326T21	DIESEL TANK	8372, PSDTX307A
326T22-1	PRODUCT TANK	8372, PSDTX307A
326T22-2	PRODUCT TANK	8372, PSDTX307A
326T7	SULFURIC ACID TANK	8372, PSDTX307A
326T8	ACETIC ACID TANK	8372, PSDTX307A

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
327T11	PROPYLENE GLYCOL TANK	8372, PSDTX307A
327T3-1	HCN TANK	8372, PSDTX307A
327T3-2	HCN TANK	8372, PSDTX307A
327T5	ACETIC ACID TANK	8372, PSDTX307A
337H1	MHBA INCINERATOR #1	8372, 106.261/11/01/2003, PSDTX307A
337H2	MHBA INCINERATOR #2	8372, 106.261/11/01/2003, PSDTX307A
337T11-1	MAIN COLLECTION RAINWATER TANK	8372, PSDTX307A
337T11	MAIN COLLECTION RAINWATER SUMP	8372, PSDTX307A
337T15	SODIUM HYDROXIDE TANK	8372, PSDTX307A
337T1	WASTEWATER TANK	8372, PSDTX307A
337T2	WASTEWATER TANK	8372, PSDTX307A
337T3-1	DEEPWELL SURGE TANK	8372, PSDTX307A
337T3-2	DEEPWELL SURGE TANK	8372, PSDTX307A
337T5	SODIUM HYDROXIDE TANK	8372, PSDTX307A
337T7	SODIUM SULFUR SALT SOLUTION TANK	8372, PSDTX307A
337T9	SOLVENT WASTE	8372, PSDTX307A
337Z2	MHBA FLARE	8372, PSDTX307A
338T4-1	SODIUM CHLORIDE SOLUTION TANK	8372, PSDTX307A

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
338T4-2	SODIUM CHLORIDE SOLUTION TANK	8372, PSDTX307A
43T13	HC SOLVENT TANK	8372, PSDTX307A
43T41	PROPYLENE GLYCOL TANK	8372, PSDTX307A
43T5	HCN WEIGH TANK	106.478/09/04/2000
43T7	SULFURIC ACID TANK	8372, PSDTX307A
44T5	HCN WEIGH TANK	106.478/09/04/2000
MHBA-FUG	MHBA UNIT AREA FUGITIVES	8372, PSDTX307A
MHBA-MCPU	MHBA MANUFACTURING UNIT	8372, PSDTX307A
PRO_MPURE	MHBA PURE	8372, PSDTX307A
PRO_MRX	MHBA RX	8372, PSDTX307A

Appendix A

Acronym List	46
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Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
COMS	continuous opacity monitoring system
CVS	closed-vent system
D/FW	Dallas/Fort Worth (nonattainment area)
DR	Designated Representative
ELP	El Paso (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
GF	grandfathered
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MMBtu/hr	Million British thermal units per hour
MRRT	monitoring, recordkeeping, reporting, and testing
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PM	particulate matter
ppmv	parts per million by volume
PSD	prevention of significant deterioration
RO	Responsible Official
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

Appendix B

Major NSR Summary Table	48
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Major NSR Summary Table

Permit Number: 8372 and PSDTX307A			Issuance Date: February 28, 2013				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
337H1	MHBA Incinerator Scrubber				3, 4,13,14,19,21,22	4,5, 13,14,19,21,22	4,19,21
		VOC	0.54				
		NOx	9.72				
		SO2	8.90				
		CO	0.86				
		Sulfuric Acid Mist	4.69				
		Exempt Solvent (Acetone)	0.03				
337H2	MHBA No 2 Incinerator Scrubber				3, 4, 13,14,19,21,22	4,5,13,14,19,21,22	4,19,21
		VOC	0.06				
		NOx	5.55				
		SO2	8.94				
		CO	0.09				
		Sulfuric Acid Mist	4.69				
		Exempt Solvent (Acetone)	0.003				
337H1 and 337H2	Incinerator Scrubbers Combined				3, 4 13,14,19,21,22	4,5,13,14,19,21,22	4,19,21
		VOC		0.61			
		NOx		31.8			
		SO2		35.1			
		CO		2.6			

Permit Number: 8372 and PSDTX307A			Issuance Date: February 28, 2013				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		Sulfuric Acid Mist		2.79			
		Exempt Solvent (Acetone)		0.13			
337T5	Sodium Hydroxide Solution Tank	PM (Sodium Hydroxide)	0.01	0.01			
337T15	Sodium Hydroxide Solution Tank	PM (Sodium Hydroxide)	0.01	0.01			
337T7	Sodium Hydroxide Solution Tank	PM (Sodium Sulfur Salts)	0.01	0.01			
337Z2	MHBA Flare (5)				7,12	7	
		VOC	0.01	0.01			
		NOx	0.03	0.12			
		SO2	0.01	0.01			
		CO	0.24	1.05			
MHBA –FUG	Fugitives (6)				15,16, 17	15,16,17	
		VOC	3.77	16.51			
		Hydrogen Cyanide	0.5	2.17			
		Exempt Solvent (Acetone)	0.19	0.82			
326T7	Sulfuric Acid Tank	Sulfuric Acid	0.01	0.01			
326T8	Acetic Acid Tank	VOC	2.7	0.02			
326T16	Diesel Tank	VOC	0.73	0.01			
326T21	Diesel Tank	VOC	0.15	0.01			
327T5	Acetic Acid Tank	VOC	0.03	0.01			
338T4-1	Sodium Chloride Solution Tank	PM (Sodium Chloride)	0.01	0.01			
338T4-2	Sodium Chloride Solution Tank	PM (Sodium Chloride)	0.01	0.01			
43T7	Sulfuric Acid Tank	Sulfuric Acid	0.01	0.01			
326T10	Propylene Glycol Tank	VOC	0.01	0.01			
327T11	Propylene Glycol Tank	VOC	0.01	0.01			
43T41	Propylene Glycol Tank	VOC	0.02	0.01			
MHBA-MSS	Planned MSS Activities				23,25, 26, 27,31	23,24,25,26 27, 28, 30,31, 32	

Permit Number: 8372 and PSDTX307A			Issuance Date: February 28, 2013				
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		VOC	1.54	0.02			
		NOx	5.07	0.43			
		SO2	0.96	0.07			
		CO	0.01	0.01			
		Sulfuric Acid Mist	1.84	0.12			
		Acetic Acid	0.01	0.01			
		Methylthiopropenal	0.01	0.01			
		Hydrogen Cyanide	0.01	0.01			

Foot notes:

- (1) Emission point identification- either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) Exempt Solvent- those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
VOC- volatile organic compounds as defined in Title 30 Texas Administrative Code 101.1
NOx- total oxides of nitrogen
SO2-sulfur dioxide
PM- total particulate matter, suspended in the atmosphere, including PM10 and PM2.5 as represented
PM10- total particulate matter equal to or less than 10 microns in diameter, including PM2.5 as represented
PM2.5- particulate matter equal or less than 2.5 microns in diameter
CO- carbon monoxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Flare is for emergency use only. Emissions shown are from pilot gas combustion.
- (6) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

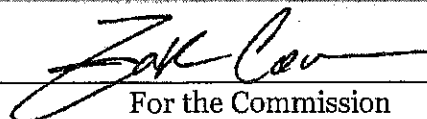


A Permit Is Hereby Issued To
MHBA CB, L.L.L.P.
Authorizing the Construction and Operation of
MHBA Chocolate Bayou Plant
Located at Alvin, Brazoria County, Texas
Latitude 29° 14' 21" Longitude 95° 11' 37"

Permit: 8372

Amendment Date : February 28, 2013

Renewal Date: May 22, 2022


For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code 116.116 (30 TAC 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC 116.115(b)(2)(B)(iii)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

SPECIAL CONDITIONS

Permit Numbers 8372 and PSDTX307A

1. This permit authorizes emissions from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT) and the facilities covered by this permit are authorized to emit subject to the emission rate limits on the MAERT and other requirements specified in the special conditions.

Planned startup and shutdown emissions due to the activities identified in Special Condition 24 are authorized from facilities and emission points identified in this permit provided the facility and emissions are compliant with the respective MAERT and special conditions.

This permit authorizes emissions from the following temporary facilities used to support MSS activities at permanent site facilities: frac tanks, containers, vacuum trucks, portable control devices identified in Special Condition 28, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities, and (c) does not operate as a replacement for an existing authorized facility.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table (MAERT). Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions with the exception of analyzer vents on methionine hydroxy analog (MHBA) product.
3. The incinerator scrubber stack emissions shall have less than 10 percent opacity as measured by the procedure set out in Title 40 Code of Federal Regulations Part 60, (40 CFR Part 60)Appendix A, Method 9. This shall be demonstrated by the compliance test required in Special Condition No. 19. **(PSD)**

Federal Program Applicability

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories promulgated for Generic Maximum Achievable Control Technology Standards, and Miscellaneous Organic Chemical Manufacturing in 40 CFR Part 63, Subparts A, YY, and FFFF.

Throughput and Product Specifications

5. The annual MHBA production rate shall not exceed the amount specified in the confidential file of the amendment application, PI-1, dated September 2, 2004. Records of the production rate shall be maintained and made available to the Texas Commission on Environmental Quality (TCEQ) Executive Director or his representatives upon request.
6. Loading and unloading of 3-methylthiopropional (MMP) and hydrogen cyanide (HCN) shall be limited to maximum flow rates and temperatures as specified in the confidential file of the permit amendment applications dated September 2, 2004, and May 15, 1997, respectively.

The flow rates may be determined by an annual test performed to identify the maximum nitrogen overpressure associated with the maximum allowable flow rate. The pressure identified shall be considered the maximum allowable overpressure for unloading until the next test is performed. The method used and results of any testing performed shall be documented and maintained on-site and be made available to representatives from the TCEQ upon request.

7. The flare pilot fuel gas shall contain less than 0.2 grain per dry standard cubic feet (dscf) total reduced sulfur. The concentration of reduced sulfur in these streams shall be determined by an American Society for Testing and Materials approved method or equivalent procedure. **(PSD)**

Fuel gas combusted at this facility shall be sweet natural gas containing no more than 5 grains of total sulfur per 100 dscf.

Emission Controls

8. The MHBA Incinerator (Emission Point No. [EPN] 337H1) shall operate with no less than 99.9 percent efficiency in disposing of the carbon compounds captured by the collection system. The MHBA No. 2 Incinerator (EPN 337H2) shall operate with no less than 99.99 percent efficiency in disposing of the carbon compounds captured by the collection system.
9. The sulfuric acid mist eliminators on the scrubber stacks shall be operational at least 97 percent of the incinerator operating time.
10. All tanks in the permitted facility shall vent to an incinerator unless shown as a separate emission point in the MAERT.

SPECIAL CONDITIONS

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11. Loading and unloading of HCN, MMP, and final product shall take place through hard-piped connections 40 CFR § 63.111 with the vessel being filled vented to an incinerator. Flexible hosing with flanges that meet equivalent American National Standards Institute (ANSI) specifications for conventional hard-piped connections are allowed.
12. Flares shall be designed and operated in accordance with the following requirements:
 - A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.
 - B. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flames shall be recorded when any waste gas stream is sent to the flare. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.
 - C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.
13. The incinerator firebox exit temperatures shall be continuously monitored and recorded. The temperature shall be maintained at a minimum at the temperature that was established during the most recent stack testing. The stack test results that established the operating temperature shall be made readily available upon request. The oxygen (O₂) content shall be maintained at a minimum 3 percent (by volume, dry basis), except during periods of planned start up, planned shutdown and other planned maintenance periods not to exceed five minutes in duration for any single occurrence.

Each incinerator firebox temperature measurement device associated with EPN 337H1 and 337H2 shall be installed, calibrated and maintained according to accepted practice and the manufacturer's specifications. Each device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^{\circ}\text{C}$. Quality assured (or valid) data must be generated when the MHBA production unit is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance or calibration may be

exempted provided it does not exceed 5 percent of the time (in minutes) that the MHBA production unit operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

14. The pH of incinerator scrubbing solutions shall be maintained at a minimum daily average of five while the incinerator scrubbers are operated under load. Solution pH concentrations shall be monitored and recorded at least once an hour together with a comparable record of the hours of operation of the incinerator scrubbers. The hourly readings shall be averaged on a daily basis to determine compliance with the minimum daily average requirement. The scrubbing solution flow rates shall be maintained at least at rates maintained during the stack testing required by Special Condition No. 19.

Process Fugitive Monitoring Programs

15. Piping, Valves, Connectors, Pumps, and Compressors in VOC Service - 28VHP

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment.

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pound per square inch (psi), absolute at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, American Petroleum Institute, American Society of Mechanical Engineers, or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as

necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump and compressor seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a

component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The TCEQ Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.

- J. The results of the required fugitive monitoring and maintenance program shall be made available to the TCEQ Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, and corrective actions taken for all components. Records of connector inspections are not required unless a leak is detected.
- K. Alternative monitoring frequency schedules of 30 TAC §§ 115.352 through 115.359 or National Emission Standards for Organic Hazardous Air Pollutants, 40 CFR Part 63, Subpart H, may be used in lieu of Items F through G of this condition.

Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

- 16. In addition to the weekly physical inspection required by Item E of Special Condition No. 15, the accessible connectors in gas or vapor and light liquid service identified in the confidential file of the permit amendment application, PI-1, dated May 15, 1997, shall be monitored quarterly with an approved gas analyzer in accordance with Items F through K of Special Condition No. 15. Requests for any TCEQ concurrence for connectors under Special Condition No. 15K shall be addressed to the TCEQ Austin Air Permits Division for review. Compliance with this condition does not assure compliance with requirements of applicable state or federal regulation and does not constitute approval of alternative standards for these regulations.
- 17. Piping, Valves, Pumps, and Compressors in HCN, MMP, or Ammonia (NH₃) Service
 - A. Audio, visual, and olfactory (AVO) checks for HCN, MMP, or NH₃ leaks as applicable within the operating area shall be made every six hours. After decontamination of a localized area where no HCN, MMP, or NH₃ is in use, AVO checks may be suspended until said chemicals are re-introduced into the system.
 - B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection or containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Records shall be maintained at the plant site of all repairs and replacements made. These records shall be made available to representatives of the TCEQ upon request.

18. The fugitive monitoring and maintenance program specified in Special Condition No. 17 shall be employed for all equipment (piping, valves, pumps, and compressors) in HCN, MMP, or NH₃ service (greater than or equal to 2 percent HCN, MMP, or NH₃ by weight).

Compliance Testing

19. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Incinerator Scrubbers (EPNs 337H1 and 337H2). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.
 - A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

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Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Office Air, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the appropriate TCEQ Regional Manager.

- B. Air contaminants emitted from the incinerator scrubber to be tested for include (but are not limited to) VOC, HCN, nitrogen oxides, sulfur dioxide, and sulfuric acid mist. Opacity of the emissions shall be determined to verify compliance with Special Condition No. 3.
- C. Incinerator and scrubber units 337H1 and 337H2 shall be sampled as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Houston Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval, and requests shall be submitted to the appropriate TCEQ Regional Manager.
- D. The plant shall operate at base load and at maximum load rates during each stack emission testing period. The base load shall be considered the normal operating condition for the applicable incinerator. The testing performed at the base load condition shall be performed at a minimum at the base temperature as indicated in Special Condition No. 13 and the excess O₂ content of 3 percent (by volume, dry basis) minimum. The permit holder shall submit a permit alteration to revise Special Condition Nos. 13 and/or 14 if the required destruction efficiency was not obtained with either of these parameters at or below the specified levels. The maximum load testing shall be performed at a minimum excess O₂ content of 3 percent (by volume, dry basis).

Primary operating parameters that enable determination of incinerator loading shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

- E. Copies of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

One copy to the Brazoria County Air Pollution Control Program, Angleton.

20. Any change in facility emissions or changes in the quantity or quality of materials processed that will result in new or increased sulfur dioxide or particulate emissions must be incorporated into the permit by permit amendment or alteration unless they meet the requirements of 30 TAC §§ 101.221 or 101.222.

Compliance Assurance Monitoring

21. The following requirements apply to capture systems for the incinerator identified as EPN 337H1 and EPN 337H2.
- A. The control device used to control pollutants like SO₂ and VOC, either:
 - i. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
 - ii. Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
 - B. Each control device shall not have a bypass.
 - C. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action.
22. The minimum liquid flow to the absorber associated with EPN 337H1 shall be 69 gpm and with EPN 337H2 shall be 69 gpm. The circulation rate shall be monitored and recorded at least once a day for each caustic scrubber. The flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

The pH for each caustic scrubber associated with EPNs 337H1 and 337H2 shall be analyzed and recorded at least once a day to comply with the pH in Special Condition No. 14. In the event the primary pH probe fails, the back up pH probe for that scrubber should be used to detect pH and the pH recorded at least once a day until the primary pH probe is repaired or replaced. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least quarterly, whichever is more frequent, and shall be accurate to within 0.5 pH unit.

Quality assured (or valid) data must be generated when the MHBA production unit is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing

inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in hours) that the MHBA production unit operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Planned Maintenance, Startup And Shutdown Activities

23. This permit authorizes the emissions from the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachments A or B and the emissions associated with it shall be recorded and include at least the following information:

- A. the process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
- B. the type of planned MSS activity and the reason for the planned activity;
- C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. the date and time of the MSS activity and its duration;
- E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

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24. Process units and facilities, with the exception of those identified in Special Conditions 27 and 28, and Attachment A shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.
- A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. After depressurizing equipment to a control device, equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
 - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psi at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
 - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel or closed liquid recovery system unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
 - D. After depressurizing equipment to a control device, if the VOC partial pressure is greater than 0.50 psi at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

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- (1) For MSS activities identified in Attachment B, the following option may be used in lieu of 2 below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 10 percent of the lower explosive limit (LEL) per the site safety procedures.
 - (2) The locations and/or identifiers where the purge gas or steam enters the process equipment or storage vessel and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable-VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 25. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. Documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the purging and VOC sampling noted above.
- E. Gases and vapors with VOC partial pressure greater than 0.50 psi may be vented directly to atmosphere if all the following criteria are met:
- (1) It is not technically practicable to depressurize or degas, as applicable, into the process.
 - (2) There is not an available connection to a plant control system (flare).
 - (3) There is no more than 50 lb of air contaminant to be vented to atmosphere during shutdown or startup, as applicable.

All instances of venting directly to atmosphere per Special Condition 24E must be documented when occurring as part of any MSS activity. The emissions associated

with venting without control must be included in the work order or equivalent for those planned MSS activities identified in Attachment B.

25. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

- (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

VOC Concentration = Concentration as read from the instrument*RF

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

- (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and not exceed the specified VOC concentration limit prior to uncontrolled venting.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

- (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.
- (2) The tube is used in accordance with the manufacturer's guidelines.
- (3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000*mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

C. Lower explosive limit measured with a lower explosive limit detector.

- (1) The detector shall be calibrated within 30 days of use with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
- (2) A functionality test shall be performed on each detector within 24 hours of use with a certified gas standard at 25% of the LEL for pentane. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
- (3) A certified methane gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.

26. This condition applies only to piping and components subject to leak detection and repair monitoring requirements identified in other NSR permits. Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period.

- A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
- B. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with instrument/detector noted in SC 25 and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of

the open ended line and monthly thereafter with an instrument/detector noted in SC 25 and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

27. This permit authorizes emissions from EPN fixed roof storage tanks during planned maintenance. The following requirements apply to tank maintenance activities:

- A. If the ventilation of the vapor space is controlled, the emission control system shall meet the following requirements:
 - (1) Any gas or vapor removed from the vapor space must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space when degassing to the control device or controlled recovery system.
 - (2) The vapor space shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
 - (3) A volume of purge gas equivalent to twice the volume of the vapor space must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 25.
 - (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
- B. The tank shall not be opened or ventilated without control, except as allowed by (1) below until one of the criteria in part C of this condition is satisfied.
 - (1) Minimize air circulation in the tank vapor space.
 - a. One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind

barriers shall be installed at all open manways and access points to minimize air flow through the tank.

- b. Access points shall be closed when not in use
- C. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
 - (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - a. Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
 - b. Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
 - c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 25.
 - (3) No standing liquid verified through visual inspection.
 - (4) The permit holder shall maintain records to document the method used to release the tank.
- D. The occurrence of each tank maintenance event and the associated emissions shall be recorded and the rolling 12-month tank maintenance emissions shall be updated on a monthly basis. These records shall include at least the following information:
- (1) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:

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- a. start and completion of controlled degassing, and total volumetric flow,
- b. all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
- c. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,

(2).the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events a and c with the data and methods used to determine it.

28. The following requirements apply to frac, or temporary tanks and vessels used in support of MSS activities.

- A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.
- B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.
- C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.
- D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
- E. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psi at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application.

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29. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.
30. All permanent facilities must comply with all operating requirements, limits, and representations in the permits identified in Attachment C during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for emissions from routine emission points are identified below.
- A. Combustion units, with the exception of flares, at this site are exempt from NO_x and CO operating requirements identified in special conditions in other NSR permits during planned startup and shutdown if the following criteria are satisfied.
- (1) The maximum allowable emission rates in the permit authorizing the facility are not exceeded.
 - (2) The startup period does not exceed 8 hours in duration and the firing rate does not exceed 75 percent of the design firing rate. The time it takes to complete the shutdown does not exceed 4 hours.
 - (3) Control devices are started and operating properly when venting a waste gas stream.
- B. A record shall be maintained indicating that the start and end times of each of the activities identified above occur and documentation that the requirements for each have been satisfied.
31. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

Thermal Oxidizer

- (1) The incinerators shall be operated as indicated in Special Conditions 8 and 13..
- (2) The thermal oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature

measurements shall be made at intervals of six minutes or less and recorded at that frequency.

The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^{\circ}\text{C}$.

32. With the exception of the MAERT emission limits, these permit conditions become effective 180 days after this permit has been issued. During this period, monitoring and recordkeeping shall satisfy the requirements of Special Condition 23A through 23D. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded. The permit holder may maintain abbreviated records of emissions from Attachment A and B activities as allowed in Special Condition 23 rather than documenting all the information required by Special Condition 23 parts A through D.
33. Planned maintenance activities must be conducted in a manner consistent with good practice for minimizing emissions, including the use of air pollution control equipment, practices and processes. All reasonable and practical efforts to comply with these Special Conditions must be used when conducting the planned maintenance activity, until the commission determines that the efforts are unreasonable or impractical, or that the activity is an unplanned maintenance activity.

Dated: May 22, 2012

Permit 8372 and PSDTX307A
Attachment A
INHERENTLY LOW EMITTING ACTIVITIES

Activity	Emissions				
	VOC	NO _x	CO	PM	H ₂ S/SO ₂
Management of sludge from pits, ponds, sumps, and water conveyances	x				
Aerosol Cans	x				
Calibration of analytical equipment	x	x	x		x
Carbon can replacement	x				
Temporary storage of brine (NaCl) solution during well testing.				x	
Instrumentation/analyzer maintenance	x				
Meter proving	x				
Replacement of analyzer filters and screens	x				
Maintenance on water treatment systems (cooling, boiler, potable)	x				
Soap and other aqueous based cleaners	x				
Cleaning sight glasses	x				

Dated: May 22, 2012

Permit 8372 and PSDTX307A
Attachment B
ROUTINE MAINTENANCE ACTIVITIES

Pump repair/replacement
Fugitive component (valve, pipe, flange) repair/replacement
Compressor repair/replacement
Heat exchanger repair/replacement
Vessel repair/replacement

Dated: May 22, 2012

Permit 8372 and PSDTX307A
Attachment C
MSS ACTIVITY SUMMARY

Facilities	Description	Emissions Activity	EPN
all process units	process unit shutdown/depressurize/drain	vent to incinerator	337H1 and 337H2
all process units	process unit purge/degas/drain	vent to atmosphere	MHBA-MSS
all process units	process unit startup	vent to incinerator	337H1 and 337 H2
all process units and tanks	preparation for facility/component repair/replacement	vent to incinerator	337H1 and 337 H2
all process units and tanks	preparation for facility/component repair/replacement	vent to atmosphere	MHBA-MSS
all process units and tanks	recovery from facility/component repair/replacement	vent to incinerator	337H1 and 337H2
all process units and tanks	recovery from facility/component repair/replacement	vent to atmosphere	MHBA-MSS
tanks	tank cleaning	cleaning activity and solvents	MHBA-MSS
see Attachment A	miscellaneous low emitting activities	see Attachment A	MHBA-MSS
see Attachment B	routine maintenance activities	see Attachment B	MHBA-MSS

Dated: May 22, 2012

Emission Sources - Maximum Allowable Emission Rates

Permit Number 8372

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
337H1	MHBA Incinerator Scrubber	VOC	0.54	
		NO _x	9.72	
		SO ₂	8.90	
		CO	0.86	
		Sulfuric Acid Mist	4.69	
		Exempt Solvent (Acetone)	0.03	
337H2	MHBA No. 2 Incinerator Scrubber	VOC	0.06	
		NO _x	5.55	
		SO ₂	8.94	
		CO	0.09	
		Sulfuric Acid Mist	4.69	
		Exempt Solvent (Acetone)	0.003	
337H1 and 337H2	Incinerator Scrubbers Combined	VOC		0.61
		NO _x		31.8
		SO ₂		35.1
		CO		2.6
		Sulfuric Acid Mist		2.79
		Exempt Solvent (Acetone)		0.13
337T5	Sodium Hydroxide Solution Tank	PM (Sodium Hydroxide)	0.01	0.01
337T15	Sodium Hydroxide	PM (Sodium Hydroxide)	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
	Solution Tank			
337T7	Sodium Hydroxide Solution Tank	PM (Sodium Sulfur Salts)	0.01	0.01
337Z2	MHBA Flare (5)	VOC	0.01	0.01
		NO _x	0.03	0.12
		SO ₂	0.01	0.01
		CO	0.24	1.05
MHBA-FUG	Fugitives (6)	VOC	3.77	16.51
		Hydrogen Cyanide	0.5	2.17
		Exempt Solvent (Acetone)	0.19	0.82
326T7	Sulfuric Acid Tank	Sulfuric Acid	0.01	0.01
326T8	Acetic Acid Tank	VOC	2.7	0.02
326T16	Diesel Tank	VOC	0.73	0.01
326T21	Diesel Tank	VOC	0.15	0.01
327T5	Acetic Acid Tank	VOC	0.03	0.01
338T4-1	Sodium Chloride Solution Tank	PM (Sodium Chloride)	0.01	0.01
338T4-2	Sodium Chloride Solution Tank	PM (Sodium Chloride)	0.01	0.01
43T7	Sulfuric Acid Tank	Sulfuric Acid	0.01	0.01
326T10	Propylene Glycol Tank	VOC	0.01	0.01
327T11	Propylene Glycol Tank	VOC	0.01	0.01
43T41	Propylene Glycol Tank	VOC	0.02	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MHBA-MSS	Planned MSS Activities	VOC	1.54	0.02
		NO _x	5.07	0.43
		SO ₂	0.96	0.07
		CO	0.01	0.01
		Sulfuric Acid Mist	1.84	0.12
		Acetic Acid	0.01	0.01
		Methylthiopropional	0.01	0.01
		Hydrogen Cyanide	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented

PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented

PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter

CO - carbon monoxide

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

(5) Flare is for emergency use only. Emissions shown are from pilot gas combustion.

(6) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

Date: May 22, 2012